

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: penc@elan.mrwo.mcgill.ca
Subject: [6608] "Mint" condition
Message-ID: <9604031651.AA20704@elan.mrwo.mcgill.ca>

On 2 April 1996 Scott (jsbraun@vivanet.com) wrote:

> I have for sale a Index Laboratories QRP Plus Transceiver.
> In "mint" condition w/ original Box & manual.

So you have a QRP plus mounted in an Altoids box (mint condition)?
Heh heh.

Back into my cave.

Rich WK2A

Norcal ARRL Life etc.

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: msdooley@rdxsunhost.aud.alcatel.com (Michael S. Dooley)
Subject: [6592] 10 meters
Message-ID: <9604030543.AA10344@collie.aud.alcatel.com>

Dave,

Great contact with Argentina. i remember about eight years ago I carried a converted 10 meter SSB rig with me when I traveled by car and frequently worked South America with 8 - 12 watts mobile. It was a trip since this was before I tried QRP and thought you had to have at least 90 watts to be heard. Quite a bit of fun! Good luck with some more exotic contacts in the future.

Mike KE4PC

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Bob Hightower <ki7mn@mycronet.com>
Subject: [6610] 30M Prop Study
Message-ID: <199604031652.JAA00841@mycro1.mycronet.com>

Bring on the 30 Meter Propagation Study!

Just completed an OHR Sprint on 30Meters, and am once again amazed at the ease of building one of these kits. Dick has done himself proud with the

construction and instruction...exceedingly clear and easy to follow. Almost like 'insert tab A into slot A'. The rig aligned very quickly, and was receiving very well right from the start.

There have been many questions about first kits, and these have to be among the replies, as well as the 40-9'ers.

C'mon, Chuck, make an announcement.

73, Bob KI7MN

QRP-L 271, ARCI 8918, NorCal 1228

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996

From: Doug Hendricks <ki6ds@telis.org>

Subject: [6593] 49er Dial Readout

Message-ID: <3162123A.6E8A@telis.org>

I was at Bruce Florip's, AA7AR, house last night (we are working on a project together), and he showed me his 40-9er. Bruce has made a dial on the plastic cover of the tuning cap. He used a Sharpie extra fine point permanent marker and he put the marks on the cap. It is similar to the dial on the Sierra, with the Frequency on the dial, and a mark on the board to reference to as you tune.

It is simple to calibrate, just use your digital receiver and zero beat the oscillator in the 49er. Take a wire from the antenna input of the receiver and lay it over the 49er. Then just tune the receiver to an even frequency, say 7.037. Tune the 49er until you are zero beat with the receiver and put a mark on the dial. Make a reference mark even with the mark on the dial on the pcboard. Then tune the receiver to 7.038 and repeat. Continue until you reach the end of the tuning range of the 49er. Now put the number beside the marks and voila you have a calibrated dial! Great idea Bruce, thanks. Now when you operate you will know where you are and you don't have to lug the frequency counter or the digital receiver with you.

I know that others must have some mods for the 49er by now. Hey, I am getting ready to edit the June issue of QRPp, and I definitely want some 49er mods to share with the rest of the guys. Don't forget that 1400 NorCal members DON'T subscribe to QRP-L and never see this list. Send your mods to me at ki6ds@telis.org 72, Doug, KI6DS

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996

From: H Smith <hbs@crl.com>
Subject: [6596] Dallas/ Ft.Worth Area
Message-ID: <Pine.SUN.3.91.960403052540.27084A-100000@crl111.crl.com>

If you live in the Dallas/Ft. Worth area and want to meet some other QRPers, then this EMAIL is for YOU!

The North Texas QRP Club, NORTEX, meets the first Saturday of each month in Addison (see directions below).

The meeting starts at 10AM and normally spills over into lunch at one of the local Addison eating establishments.

This is a great time to meet some fellow QRP enthusiasts and to eyeball some completed and near-completed projects. I'll bet we could even get Chuck, K5FO to bring some of the subjects of those great pictures that he has recently posted. :-)

Directions to the meeting are:

First floor of the building on the southeast corner of Arapaho and Addison Rd. It's one block north of Beltline. Quorum Centre is the name of the building - three stories glass and brick.

Come into the main entrance and follow the signs to the SGI Training room.

CU There,

Smitty, NA5K

Henry Smith (hbs@crl.com)

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: ar722@cleveland.freenet.edu (Donald K.Philbin)
Subject: [6633] Danish Double Treat!
Message-ID: <199604032339.SAA21589@owl.INS.CWRU.Edu>

Danish Double Treat!

It is now 1:33 am local (23:30 UTC) and we are experiencing a Lunar Eclipse (Ask Chuck for an explanation!). The moon is real QRP with its Intensity greatly reduced to a soft red

colour.. Also able to view the comet and its tail low on the horizon..

Why sleep with all of this happening!!!

72

Donald K. Philbin
OZ2DKP & KD6TK

--

D.K. Philbin, Fulbright Instructor	Birkerod Gymnasium og HF
Home: Hestkobjev 10	Sondervangen 56, Postboks 220
3460 Birkerod, Denmark	3460 Birkerod, Denmark
Tel: (45) 42-81-13-52	Fax: (45) 45-82-02-57

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: WJ4PRandy@aol.com
Subject: [6637] digital dial part2
Message-ID: <960403210213_505112923@emout08.mail.aol.com>

digital dial part2
(or "theres no short-cut to
doing the job right!")

Ok ok ok, some of you already knew...
the epoxy didn't hold the stand-offs
for the counter board.
So, I took a big breath and took the
time to drill the two holes needed for
the stand-offs. 30 minutes later, its done.

I forgot to mention in all that I wrote about
the installation of the dial, that the display
board required two washers in addition to the
supplied stand-offs to miss the tuning capacitor
frame. Or you could use some shorter stand-offs.
Either way, the supplied stand-offs allow the
display board to hit the capacitor frame dead-
center.

Its a work of art! c u on 7.040.0.....

73, Randy WJ4P

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: WJ4PRandy@aol.com
Subject: [6626] Digital Dial/the story
Message-ID: <960403154930_504858960@mail02.mail.aol.com>

The Digital Dial
(or How To Apply Creeping Elegance To A
Radio With Too Much Empty Space Inside!)

Ok, some of you have responded to my posting on the digital dial I added to my OHR400. Not one of you have said "Are you CRAZY?!!". In fact, a few have even voiced approval for my actions.

I'm not that good at chronicling my actions but I did want to tell you the hardest part was deciding to actually install the dial inside the 400. I really agonized over that one! I mean, its not easy to decide to (potentially) deface one of your favorite rigs. Eventually I decided that if I did infact absolutely botch this operation, I thought I might be able to beg Dick to sell me a new front panel...I had my story ready about the drug crazed hippies that came into the shack and zeroed in on the 400!... The Digital Dial is designed to be stand-alone and with plenty of options and memories to allow it to work with *any* rig. It almost had too much going for it to be mounted inside one rig. But there was all that room in there!!!

The digital dial kit went together in a couple of hours with very few non-intuitive points for an accomplished kit builder. The two boards are about the same size - about 4 inches long and the counter board is about 2 inches wide and the display board is about and 1.5 inches wide.

I used the supplied template to locate all the holes as well as the rectangular notch for the 5 digit LED display. I removed the front panel entirely from the unit - it wasnt as hard as it looked- and used a nibbler for the display hole which is a deep notch from the top of the panel. The holes for the control buttons were made with a hand operated punch we had at work and I used counter sunk screws to attach the display boards' standoffs to the front panel.

The counter board mounting was a challenge. I obtained a

couple of
hex/6-32 threaded standoffs and was prepared to drill a few
holes inside until I saw where they were positioned. These
holes would require a major dis-assembly - I'm for doing a
good job...but this looked like too much work! I opted to
epoxy the bottoms of the standoffs to the aluminum chassis.
It looks secure enough. I have a poor history with epoxy...
I'm holding my breath! The counter board is mounted well above
the oscillator board over the "back/right" corner.

The end result is an absolute joy! I set the dial up to have two
"modes". One mode keeps the display on all the time, and the
second mode blanks the display to conserve power. It was pretty
simple to program in the offset (9mHz) and get the direct freq.
to read out on the display.

I had one problem with a buzz in the headphones from the counter
controlling the LED display. A resistor and a large cap on the
power supply line to the counter board quieted that down nicely.

The Digital Dial operates VERY smooooooooothly! There isnt a trace of
jitter and the readout follows the knob like it was connected physically
to it! Part of the joy here is the way this all turned out, you know, not
butchering the rig! The other part is the joy of *knowing* where the heck
you are on the band without trying to interpolate between the hash marks
on the panel. It is a joy to operate now.
I've even erased the pencil marks from .040 and .060 on the front panel!

(FYI Radio Adventures Corp is at rac@usa.net and have been great to
buy from. I'm just another satisfied customer!)

73, Randy WJ4P

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: rac@usa.net
Subject: [6630] DigitalDial info
Message-ID: <199604032239.PAA03964@mail.usa.net>

00oooops! I goofed. The number listed in my previous post re:
DigitalDial questions was wrong. It was my home number. It's OK
to use it but you will probably get the machine since I seem to live
here at work :-).

The correct number for our office is 814-437-5355 or 814-677-7221.
The first is preferred but if I'm not there you can get our

receptionist at the second number during business hours.

Sorry for the inconvenience. -73- -Lee WA3FIY-

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: H Smith <hbs@crl.com>
Subject: [6597] DX from the Mobile QRP
Message-ID: <Pine.SUN.3.91.960403053453.27084B-100000@crl11.crl.com>

Forty meters was in pretty good shape this morning (Wednesday).

>From the car, on the way to work (in traffic):

6:20 AM CST worked JA1BWA, Toshi. He gave me 559 I gave him 589.
I was running 5 watts using the TS-50 and a Bugcatcher.
Frequency was 7.010. There was a small pileup.

There were several JA's and VK's and even T30DW on 40 this AM. But JA1BWA had the biggest signal.

CU on 40 CW,

Smitty, NA5K/m

Henry Smith (hbs@crl.com)

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: wdzeares@rockdal.aud.alcatel.com
Subject: [6602] FS: DSP9
Message-ID: <9604031531.AA02695@aud.alcatel.com>

For Sale: like new DSP9 with cables and documentation.
Older model can be upgraded by Timewave. \$80 and I will
ship in CONUS. email home: wdzeares@ix.netcom.com
work: wdzeares@aud.alcatel.com

72/73 dennis k3ets

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996

From: robert fowle <hammarlund@voyager.net>
Subject: [6625] FS: new old stock Ten-Tec & Ameco
Message-ID: <199604032000.PAA21054@vixa.voyager.net>

hi gang, have the following items by Ten-Tec & Ameco, which are
all New Old Stock, i have no use for them & wish move them to a new home
where they will be used and needed.

TEN-TEC 1/ 241 CRYSTAL OSCILLATOR 33.00
1/ 679 keyer (internal) for Century 22
33.00

AMECO: 1/ PS-1 POWER SUPPLY 25.00
2/ PS-2 POWER SUPPLY 25.00 EA.
1/ CLB CONVERTER 15.00
2/ CHT CONVERTER 15.00 EA.
2/ CG CONVERTER
15.00 EA.
1/ CLG CONVERTER
15.00

these prices are shipped. of coarse, if you have any original manuals
and wish to do some trading, thats fine too.
let me know via e-mail, or feel free to call.
thanks for reading my post.

=====]-[->
Robert Fowle KC8DBC
The HAMMARLUND Historian
Ph. voice or fax 517-789-6721
1215 Winifred
Jackson, Mich. 49202-1946
E-mail at: hammarlund@vixa.voyager.net
HAMMARLUND LITERETURE WANTED
WANTED: MANUALS FOR ANY MAKE RADIO EQUIPMENT
=====]-[->

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: PA3ASC@mailbox.hol.nl (Mike Perry)
Subject: [6619] Help. Ham radio shops around Orlando Fla.
Message-ID: <199604031903.VAA10296@bonny.hol.nl>

Hi gang,

A fellow ham (not on e-mail) has to go
to Florida for a few weeks on business.
Can anyone give me addresses of radio
dealers etc. in the area of Orlando / Coco
Beach, so that I can pass them on.
All tips greatly received.
Many thanks in advance if you can help.
73 de PA3ASC

--

Regards,
Mike Perry. [e-mail :- PA3ASC@mailbox.hol.nl]
=====

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: JCoote@aol.com
Subject: [6617] Insulators Wanted
Message-ID: <960403134408_368371890@mail02.mail.aol.com>

I am looking for PYREX glass "dog bone" antenna insulators. These are clear
glass, around four to six inches in length with smooth holes in either end.
They are used for HF wire transmitting antennas such as dipoles, vees, etc.

I have seen them on a few HF wire antennas and in one (defunct) hardware
store many years ago.

73, Jay
WB6AAM

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
Subject: [6594] Keyer project done
Message-ID: <3162180a.pandora@pandora.lugs.org.sg>

Hi Gang!

Whew! Finally got that damned keyer working. What keyer? Oh,
the one I've been working on. Lately I've been thinking of adding
a keyer to my ARK-20 which only accepts a straight key. It would
be easy for me to whip up a very small Curtiss 8044 based keyer to
put it inside BUT that would mean that I'll be stuck with a paddle
and not be able to use the straight key. I toyed with the idea of
adding a toggle switch to select the paddle/key but the idea did

not seem terribly elegant. Finally, after much debating I decided to build a special keyer that would automatically distinguish the type of key in use. As there wasn't much space in the ARK-20, I had to look at a very compact solution. Hence my keyer project was born.

The keyer uses an 87C51 microcontroller and measures 6.5 by 2.8 cm (not inches!). Most of the parts sits in the space under the CPU in the space inside the CPU's 40-pin socket. The parts count is fairly low:-

*	1	87C51	(Philips) 40-pin MCU
*	1	ADC0832	(NS) 8-pin A/D convertor
	1	78L05	5V regulator
*	1	2N2222	driver transistor
	5	0.1uF	mylar decoupling caps
*	2	10uF/16V	electrolytic caps
	1	4.7k/0.25W	resistor
*	1	8.2k/0.25W	resistor
*	1	11.0592 MHz	crystal
*	2	22pF	ceramic caps
	1	68mH	RFC
*	1	40-pin	turn-pin socket
*	1	50k	variable resistor (off-board)

It seems a lot, but remember, this includes the 5V regulated power supply, along with excessive decoupling and RF blocking parts. If you already have a 5V line and prefer to use that, then your parts count would be even lower. Likewise, if you remove excess decoupling capacitors, the parts count goes down even further. The '*' marks the essential parts. The rest are just there to play safe. I didn't want RF from the keyer getting into the RX front-end since they're mounted in the same enclosure. The 50k variable is not critical, since it only acts as a voltage-divider. I suppose even a 100k value would work here.

When assembled, 3-wires come off for the variable resistor. 2-wires for the keying. 4-wires for the paddle/key. The configuration is as follows:-

To original key port connections

1	Keyer
2	Gnd

To speed control pot

1	+5V to variable resistor (1)
2	Variable resistor wiper (2) speed control

3 Gnd to variable resistor (3)

To stereo socket with break sense connection

- 1 Dot
- 2 Dash
- 3 Sense
- 4 Gnd

To power supply

- 1 +7 to +12V power supply
- 2 Gnd

A lot of redundancy in the ground connections could be avoided in the actual installation but I just wanted to be consistent.

There are also some optional connections.

To serial port for computer control (optional)

- 1 RX-serial
- 2 TX-serial
- 3 Gnd

To ARK-20 thumbwheel for frequency reading (future)

1-16 Data pins

To any analog voltage from 0-5V (optional)

- 1 Extra ADC channel
- 2 Gnd

I intend to eventually implement computer control for my ARK-20 using the format for the CI-V of ICOM radios. I haven't gotten round to this yet but the hardware is already in place.

After many rounds of program/debug/UV-erase/program/etc. I finally got the keyer to work correctly. Learnt a lot about the 8051 along the way. This looks like it could be a very useful part. Meanwhile I also picked up some Hitachi LCD displays really cheap at about US\$3.00 each. I can find a neat way of adding this to the ARK-20 but it will find its way into some of my projects eventually (I hope, or it will join the increasing pile of junk parts :-)). On the whole, I am very pleased with the result because of its small form-factor, and the possible new things I can implement in software without changing too much hardware. Furthermore, I believe this is the only auto-keytype-sensing keyer I have seen. You can pre-set the keying speed limits in the software without having to change any parts. I haven't actually installed it into my ARK-20 just yet but have tested it out quite thoroughly. This evening I will start the drilling for the mounting posts. The 87C51 MCU

has about 4K of EPROM space, of which I used just a few hundred bytes, leaving plenty of room for creativity. There are lots of unused (as yet) port lines. You could also try out the 89C1051 or the 89C2051 MCU's by Atmel which are code compatible and much smaller. I did not use these parts because I cannot find them locally, nor did I have a programmer for them. The total cost of parts (built on wire-wrap style breadboard) is about US\$20 or so. This is because I am using a UV part for the MCU. If you use an OTP part, it will be much cheaper. The single most expensive part is the 87C51 which cost me some US\$14.00 or so. In the US this might be cheaper.

Below is the code I used in case any one is interested. You see that it is pretty short but is all in assembly language. I'd be pleased to entertain any questions about the circuit and if there is enough interest for such a project (which is not limited to the ARK-20) I'll see what I can do about getting a picture on the net and maybe the circuit diagram as well. Have fun. After this I am going to make a few QSO's with the ARK :-)

73 de 9V1ZV Daniel

\$MOD51

```
defcnt equ 1600
definv equ 65535-defcnt+1
dchi equ definv/256
dclo equ definv-dchi*256
WPMMAX equ 7
WPLIM equ 63
addr equ 3 ; start-bit, ch0 single ended

keyport equ P2
keyer bit keyport.7
stcon bit keyport.6
pdotk bit keyport.5
pdshk bit keyport.4

kst data 20h
kdotk bit kst.5
kdshk bit kst.4

adcclk bit keyport.3
adcdo bit keyport.2
adcdi bit keyport.1
adccs bit keyport.0

keymask equ 0FEh
```

```

ksdelay equ    50
inispd  equ    (WPMAX+WPMLIM)/2
stk_ptr equ    5Fh
divsr   equ    256/(WPMLIM-WPMAX)

```

```

keyspd  data    0Fh
noditt  data    10h
ditt    data    11h
kdot    data    12h
kdash   data    13h
lastat  data    14h
curstat data    15h
result  data    16h

```

```

myflags data    21h
keytyp  bit      myflags.0

```

```

org      0000h
ljmp     Start

```

```

org      0003h
reti

```

```

org      000Bh
clr      TR0           ; stop Timer 0
ljmp     Timer_Int     ; service interrupt

```

```

org      0013h
reti

```

```

org      001Bh
reti

```

```

org      0023h
reti

```

```

org      100h
Start:
mov      ie,#0         ; turn off all interrupts
mov      sp,#stk_ptr   ; initialize stack

mov      a,#07Fh       ; initialize all ports, except keyer
mov      keyport,a
clr      keyer

clr      a              ; initialize keyer variables
mov      kdot,a
mov      kdash,a

```

```

        mov     noditt,a
        mov     ditt,a
        mov     myflags,a
        mov     lastat,a
        mov     a,#inispd
        mov     keyspd,a

        mov     TMOD,#01h        ; Timer 0 as 16-bit timer
        clr     TR0               ; stop Timer 0
        mov     TL0,#dclo        ; pre-load 16-bit count
        mov     TH0,#dchi
        setb    ET0              ; enable Timer 0 interrupt
        setb    TR0              ; restart Timer 0
        setb    EA               ; start all interrupts
        acall   Ckstat

spdl1:
        clr     adcclk
        clr     adccs            ; chip-select, start conversion
        mov     a,#addr
        mov     b,#3            ; number of bits for address
loop1:
        rrc     a
        jc      one
zero:
        clr     adcdi
        sjmp    cont
one:
        setb    adcdi
cont:
        acall   Pulse           ; read out data (1-3)
        djnz    b,loop1
;        acall   Pulse           ; sync clock pulse (4)
        mov     b,#8
loop2:
        acall   Pulse           ; clock in ADC data
        clr     c
        jnb     adcd0,carry      ; read in ADC data bit
        setb    c
carry:
        mov     a,result
        rlc     a               ; shift in MSB first
        mov     result,a
        djnz    b,loop2
        setb    adccs           ; de-select ADC, EOC

        mov     a,result        ; scale and convert data
        mov     b,#divsr

```

```

        div    ab
        add    a,#WPM_MAX
        mov    keyspd,a          ; update key speed

        acall  Ckstat
        sjmp   spd11

Pulse:
        setb   adcc1k
        nop
        clr    adcc1k
        ret

Ckstat:
        setb   stcon
        jnb    pdshk,tstk0       ; if either paddle grounded
        jnb    pdotk,tstk0
        clr    ET0
        clr    TR0
        clr    stcon             ; setup for test
        jb     pdotk,tstk0
        setb   stcon
        setb   ET0
        setb   TR0
        mov    curstat,#0        ; nothing in socket
        sjmp   tstk1

tstk0:
        setb   stcon
        setb   ET0
        setb   TR0
        mov    curstat,#1        ; something plugged in

tstk1:
        mov    a,curstat
        cjne   a,laststat,chgtp1
        sjmp   chgtp2

chgtp1:
        mov    laststat,a        ; update last plug state
        jz     chgtp2
        clr    keytyp            ; assume paddle
        jb     pdshk,chgtp2      ; check if it is straight key
        setb   keytyp

chgtp2:
        ret

Timer_Int:                                ; Timer 0 ISR
        push   psw
        push   acc               ; save accumulator
        mov    TL0,#dc10        ; reload 16-bit count

```

```

        mov     TH0,#dchi
        setb    TR0                ; restart Timer 0 immediately
        mov     kst,keyport
;      mov     a,keyport
;      mov     kst,a
        jb      keytyp,strt1k1     ; if straight key
        jb      kdotk,t11         ; if (!kdotk
        mov     a,kdot             ; && !kdot)
        jnz     t11
        mov     kdot,#2           ; kdot = 2
t11:
        jb      kdshk,t12         ; if (!kdshk
        mov     a,kdash            ; && !kdash)
        jnz     t12
        mov     kdash,#2          ; kdash = 2
t12:
        mov     a,noditt
        jz      t13               ; if (noditt)
        mov     a,ditt
        jz      t14               ; if (ditt)
        dec     a                 ; ditt--
        mov     ditt,a
        jnz     t14               ; if (!ditt)
        clr     keyer             ; output(keyport,keyoff)
t14:
        mov     a,ditt
        jnz     t15               ; if (!ditt)
        dec     noditt            ; noditt--
t15:
        sjmp    tilend
strt1k1:
        jb      kdotk,strt1k2     ; straight keying
        setb    keyer
        sjmp    tilend
strt1k2:
        clr     keyer
        sjmp    tilend
t13:
        mov     a,kdot
        orl     a,kdash
        jz      tilend            ; if (kdot || kdash)
        mov     a,kdot
        cjne    a,#1,t17          ; if (kdot == 1)
        clr     a
        mov     kdot,a            ; kdot = 0
        mov     a,kdash
        cjne    a,#2,t111         ; if (kdash == 2)
t111:

```



```

        mov     a,keyspd
        mov     noditt,a           ; noditt = keyspeed
        add     a,keyspd
        add     a,keyspd
        mov     ditt,a           ; ditt = 3 * keyspeed
        mov     kdash,#1         ; kdash = 1
        setb    keyer            ; outport(keyport,keyon)
        sjmp    tilend

til7:
        mov     a,kdash
        cjne    a,#1,til8        ; if (kdash = 1)
        clr     a
        mov     kdash,a          ; kdash = 0
        mov     kdot,a
        cjne    a,#2,tilend      ; if (kdot == 2)

til10:
        mov     a,keyspd
        mov     ditt,a           ; ditt = keyspeed
        mov     noditt,a        ; noditt = keyspeed
        mov     kdot,#1
        setb    keyer            ; outport(keyport,keyon)
        sjmp    tilend

til8:
        mov     a,kdot
        cjne    a,#2,til9        ; if ((kdot == 2)
        mov     a,kdash
        cjne    a,#1,til10       ; && (kdash != 1))

til9:
        mov     a,kdash
        cjne    a,#2,tilend      ; if ((kdash == 2)
        mov     a,kdot
        cjne    a,#1,til11       ; && (kdot != 1)

tilend:
        pop     acc              ; restore accumulator
        pop     psw
        reti                     ; end of Timer_Int ISR

end

```

--

```

Daniel Wee | daniel@pandora.lugs.org.sg
9V1ZV      | daniel.wee@f516.n600.z6.fidonet.org

```

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: "Poinsett, Benjamin F." <POINSEBF@f3groups1.fsd.jhuapl.edu>

Subject: [6627] Leaving The List -- Temporarily
Message-ID: <31625E68@fsdsmtpgw.fsd.jhuapl.edu>

Gang,

I am retiring from my job and will lose my Internet access. I hope to establish a connection from my home and rejoin the list in the near future. I will unsubscribe in the next few days.

I have enjoyed the QRP-L. Lots of good information and interesting discussions. Thanks for the many interesting and illuminating postings. I hope to rejoin soon.

72 & 73,

Ben, K3BP, QRP-L 421, GQRP, and ARRL Life Member

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Stan Wilson <randyw@crl.com>
Subject: [6607] Low Power - Quest to do the Impossible
Message-ID: <3162A602.7C73@crl.com>

Low Power CW/CCW Beacon/Station under construction.

Background -

This project actually started several years ago. However, due to the recent beacon work of WA3NNA and AA4XX I have finally gotten motivated to get it completed. For several years I have been thrilled with even the thought of working stations down -20db in the noise. As a result, I have searched for any information on Coherent CW design, receiver design, weak signal operation, etc.. I have always watched at the hamfests, surplus houses, etc. for (strange to ham radio) equipment that I could use. Now with just a little effort I should be able to finish up the station designed for very weak signal communications.

My Specifications -

Frequency Stability: High as possible, minimum 10^{-7}
Power level: Minimum of 1 milliwatt, maximum 5 watts
Operation: Must be able to use for CW as well as CCW
Bands: Minimum 40 and 80 meters

Equipment Setup -

I found a HP quartz crystal frequency standard 103AR (spec freq stability

5x10¹⁰ per day). Since these have no legitimate ham radio use the price was very reasonable. It came without power supply, so after searching came up with a dual 24 vdc supply for the power source (it required +/- 20 bdc). The power supply costs more than the mint condition 103.

I built a WWVB receiver (73 magazine Jan-Mar 1994 or 93). FAR Circuits has the PC boards.

I picked up a Navy surplus T827 transmitter from Fair Radio. These have an internal frequency (stability 10⁸) standard and can be reference to an external standard like the HP103AR for greater stability. The navy manual on these is very poor, but I am just about to get it all running. The output stage is a tube with the rest of the circuitry solid state. It is built like a tank within a tank. Power output 250 milliwatts. It weighs about 80 lb and is very small about 17"x17"x7". Nice features I can use it on the HF amateur bands (80 - 10) Frequency settable to 500 hz. All digital

For a keyer I am using a CMOS Super II that I built up. It will be modified so I can use it on CCW as well as CW.

For a controller I am using a Proto-board (I found in the back pages of Circuit Cellar) of a 80C51 that will be programmed to do the level switching, house keeping, etc. I plan on feeding the WWVB timing pulses (real time) from the WWVB receiver to do the power switching (time).

Comments -

This setup is over kill for a CCW setup, but I wanted to eliminate as many possible sources of errors as possible from the experiments. It is super overkill for a low power CW beacon.

Total investment to date is about \$650. So one can do very high level scientific testing without spending a fortune.

Regular amateur radios can be used to receive the CW and CCW signals. Those equipped with CCW circuits (Ref: VE2IQ's circuit/software QST 1993) should be able to dig CCW signals that are -20 db into the noise.

FAQ - Is it work it ? Very good question, at this time I have learned a great deal about how radios actually work (stability, gain distribution, etc.) and communications systems. I have enjoyed correspondence with others around the world also on a quest to do the impossible and work stations during poor sunspot cycles and propagation conditions. If I am able to copy one signal that is truly non-readable by normal means then the quest will have been worth the effort.

FAQ - Can I do it with simple equipment ? Yes, the first CCW station used a Ten_Tec PM-3 (modified).

Time table -

I am running about 9 months behind my original schedule. My revised schedule is for the CW beacon to be on in late May 1996 and the CCW beacon to be available by late summer. At present this all appears to be feasible. When I get it all setup will do a homepage with photos and drop a note here on the list about schedules.

Comments and/or questions please reply via randyw@crl.com

Regards de Stan AK0B

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Richard Fisher <ki6sn@pe.net>
Subject: [6611] May Worldradio QRP Billboard
Message-ID: <Pine.SOL.3.91.960403085221.8422A-100000@victoria>

Coming in May 1996's Worldradio QRP column:

-- A FORTY-9ER FAN. A new direct conversion transceiver kit known as the Forty-9er fits comfortably on a PC board smaller than a credit card. But don't assume its size is a compromise to performance. A review of Wayne Burdick, N6KR's, 40-meter rig, with a performance review after a rugged workout during the Colorado QRP Club's Winter QSO Party. (Review accompanied by photograph)

-- FIELD DAY SOLAR. Two items available from SunLight Energy Systems are all the ingredients you'll need to keep your batteries topped-off for Field Day '96: the MSX-5L ``Lite'' series solar panel, and the tiny SunLogic Micro ``M'' solar charge controller. Here's a look at how they fit into the world of low power, portable communications. (Detailed product information accompanied by photograph)

-- QRP ARCI ELECTION RESULTS. A rundown of who's who and who's new on QRP Amateur Radio Club International's board of directors. Which radio amateurs have been called to duty?

An index and synopsis of Worldradio QRP columns from April 1993 to May 1996 is available free via e-mail. Send requests to: KI6SN@pe.net

Vy 72,

Richard Fisher, KI6SN Worldradio QRP columnist

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: bhopkins@polarnet.com (Bruce Hopkins)
Subject: [6618] Morning Fun...
Message-ID: <v01530500ad886e549b25@[204.119.24.136]>

Hi Gang,

Just had to share this mornings wake up call...

Here in Alaska we are up to about 16 hours of daylight so 20m is staying open longer... In the early morning hours we hear Europe over the pole until about 1800z... The band goes quiet for a spell and then the lower 48 starts to build if the band intends to be open... In the late afternoon the band takes a radical swing to the southwest and then settles into Japan, Russia and eventually back to Europe over the pole until it closes shop for the night...

Well this morning at about 1700z, my trusty sled dog decided it was time to be up and active, "Heck Dad, its already been light for almost 3 hours"... I stumbled down the ladder from the loft without injuring myself, that isn't easy with only one eye open carrying a 60 pound dog, and turned on the coffee maker... Turned on the rig and signals were both plentiful and strong from over the pole... I found a DJ3 not only calling CQ DX but looking for KL7 and one other prefix... The thought crossed my mind to go to QRO power to make sure he got his needed KL7... No, this QRP is what I need so after a few attempts he digs me out and gives me a 419... Had a nice 15 minute chat, said our 73's, and I headed for the coffee pot...

What a nice way to start a day off... Got a warm fuzzy before getting my good eye open and even before my first cup of coffee... It don't get much better than this until Old Sol starts developing more pox...

72/73/oo's - Bruce ★ KL7JAF

QRP-L #380 QRP-ARCI #9061 G-QRP #9181
Norcal #???? ISSB #14548
McPig #003 TFO #359
E-Mail: bhopkins@polarnet.com
BBS: KL7JAF@KL7GNG.#NAK.AK.USA.NOAM
Web Page: <http://www2.polarnet.com/~bhopkins>
Snail Mail: B. Hopkins / P.O. Box 10079 / Fairbanks, AK. / 99710

"Every Man should learn to play the Flute,

but not well..."

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Wayne Barnhart <wayneb@on-ramp.ior.com>
Subject: [6591] nw8020 again part 2
Message-ID: <Pine.LNX.3.91.960402202958.451A-100000@on-ramp.ior.com>

I see the first part of my msg failed to include everything.

I wanted to thank everyone who responded to my last question. The consensus was that a zener diode was needed between the final collector and ground.

That was the first part...sorry

Wayne WB7WHI
Spokane, Wa.

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Paul Erickson <paul1@wizard.ucs.sfu.ca>
Subject: [6632] paddle question
Message-ID: <9604032327.AA12959@wizard.ucs.sfu.ca>

Hi Everyone,

I'm in the process of trying to decide which new paddles to buy. I currently use a set of benchers and like them... (must be warped personal taste ;-)
I like paddles with a very light touch. I have tried the vibroplex iambics and find them heavy. I'm trying to find a pair of kent paddles within close driving range to try out, but so far no luck, and a friend who is

a bench user like I am, had bought a pair of kents while in England but sold them immediately upon returning to Canada. From the diagrams and pictures of the kent and envirotronics paddles, they would seem to suffer from the same problem due to the relatively higher mass of the moving parts which will increase the moment of inertia thus necessitating stronger springs to overcome, and thus contributing to a "heavy feel". Hope this makes sence.

Would appreciate hearing any comments.

cheers, Paul
VE7CQK
email: paul1@wizard.ucs.sfu.ca

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Jerry <jfelts@rapidcity.com>
Subject: [6628] QRPP
Message-ID: <199604032144.0AA00809@host1.rapidcity.com>

Is the March issue of QRPP out yet? I thought I read it was out, but have not got mine yet!

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: svein@eci1.ucsb.edu (Svein Vetti)
Subject: [6623] Radio transmitter design book
Message-ID: <9604031931.AA25694@violet.ucsb.edu>

Hi, the bookstore called me today and told me the book is out of print. That means that the ONLY book available in the US purely about transmitters no longer exist.

RIP

And also:

Thanks to all of you that helped me with the wind-sensor.

-Svein

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: ae4ic@nr.infi.net (BOB KELLOGG)

Subject: [6605] Rat Hunt Report-Tue

Message-ID: <199604031620.LAA26084@mh004.infi.net>

Well gang, the Rat hunt last nite was very interesting. I can understand why Fox hunting is so attractive to both Foxes and hunters. It is quite a challenge at both ends. Many thanks to those of you that hunted for the Rat, whether you found him or not.

European BC QRM seemed worse than usual here in the east. - And the hetrodynes wanted to settle right on 7.040 and 7.110. Do you hear them in the midwest and west? But the challenge is what makes it fun.

CALL	TIME	RST SENT	RST RCV	QTH	NAME	COMMENTS
7.040 +/-						
KB2EE	0209	579		NY	LARRY	running 15 watts
WD9EYB	0216					heard him, but lost him
KC1FB	0222	569	589	CT	JIM	
7.110 +/-						
WB9LKC	0233	339	339	WIS	RAY	
K1ZXF	0239	449	549		JACK	
N2JNZ	0246	449	339		GEORGE	
7.040 +/-						
WA7FCU	0334	339	339	UTAH	BOB	
K2TVY	0355	559	579	FLA	FRANK	

My rig was a NW8020 running 5 watts to a G5RV dipole.

Not every one was a big time Fox hunter. In fact, some were not even on the net. Felt bad because I was obliged to cut QSOs short with those I recognised, in case someone else was looking.

The last one was a 30 minute QSO. Frank was mobile with his Icom 735 (?) turned down to 5 watts into a Hustler whip. He was near Key Largo and had a good steady signal. Said he was always amazed at what he was able to do with just 5 watts. Also said the Rat hunt sounded like fun.

It was, and thanks again, guys.

CUL,

Bob Kellogg, AE4IC

Prolably, but not nececelery. - Benny Hill

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: "P.F. Coppin" <coppin@freenet.hamilton.on.ca>
Subject: [6622] Soapbox
Message-ID:
<Pine.SOL.3.91.960403141710.13351A-100000@james.freenet.hamilton.on.ca>

Hi guys:

I've been following the discussions about frequency usage and at the risk of upsetting some of you, I'd like to soapbox a little bit. >From my QTH, qrp on 40M, at the bottom of the cycle, doesn't make a whole lot of sense. I've been listening for the rat the last few times, including two hours for AE4IC, and yes, I heard a bit of cw around 7.040. None of it was copyable enough to read. What I did hear was S9+50 broadcast, including, as mentioned, a big fat heterodyne on .40 and .110. And that's pretty much all I hear after the sun goes down in Europe. There's gold waiting for the amateur that learns how to beat to and modulate those heterodynes!

But seriously, sometimes those of us who live outside the US wonder if American hams realize that the rest of the amateur world does not march to the beat of the U.S. band plans. We're glad you have them, because for the rest of us, we wouldn't be able to get a word in edgewise, literally. All amateur HF frequencies above about 4 Mhz are international in range subject to local diurnal effects. This means we ALL get to enjoy 14.313 et al, but it means something else. Net operations on any band above 4Megs are going to be subject to "competition" from other parts of the world, because quite simply, your net carries no weight in other jurisdictions. Hopefully, the cooperative spirit of amateur radio will prevail. Nets that are intended to serve local "national" interests should be on the low bands or in vhf/uhf space. The scourge of the North American ham scene is the amateur who doesn't see anything wrong with inputting a kilo into a 20M dipole at 25 or even 30 feet. (Big mouth, no ears. If you can't hear 'em you're not running enough power! Can't put an antenna up?- Here's how to load your eavestrough to the max! Got it to work, only spent two weeks tuning it up!)

The international range of these frequencies means that if you are going to use them effectively, particularly at QRP levels, you gotta get out of the middle of the road! The ARRL band plan specifies 7.040 as DX RTTY! Frequency usage allocation is not the same in all ITU regions 1,2 or 3. The Europeans don't get to use anything above 7.100, which means their band plans WILL use 7.0-7.1 differently than you, and you're going to hear it! Much the same applies to 20M and some of the other bands. You will hear an increasing amount of US and non-US traffic in 14.0- 14.7, because the digital boys are elbowing everybody else out of the way. I'd like to use the prop beacons at 14.100, but all I get now are 6kc

wide packet blasts .

At the other end, QRP SSB on 10M at 10PM local, at the bottom of the cycle? Are you kidding? Ground wave is the best you're going to get, maybe a little scatter, maybe a hop, but the MUF collapsed hours before.

All right, I feel better now - my point is, spend a bit of time with chapter two of the ARRL Operating manual, and do some frequency planning. You may find a much larger interest group out there than you think, given half a chance for the signal to get through. Now I appreciate that many rigs are rock bound and that some frequencies are chosen because available cheap crystals dictate the spot. But perhaps an extra couple of bucks spent on having a crystal cut may pay big rewards in enjoyment. After all, its supposed to be fun! I also recognize that QRM is not the same at each QTH - coordination is important here.

Anyway, I'm impressed with the civility of this group -keep it up - you do yourselves proud. But you're not poets! Hi!

73s de Paul Yeah, a newcomer to qrp-l #496

VE3PFT, VA3RSI/MM HW-7, SB104A @ <2watts

-:-:-	PAUL F. COPPIN	coppin@freenet.hamilton.on.ca
-: :-	-:-:- -:-:-	VE3PFT/VA3RSI CFH5391/MM
-:	-: :- -: :- ::	VE3PFT@VE3DTV.#scon.on.ca.na
-:-:-:-:-	-:-:-:- -:-:-:- -:-:- -:-:-	VE3PFT@VE3PFT-2.#scon.on.ca.na
	-: -:	ve3pft@port.ve3mch.ampr.org
	-: -:	ve3pft@ve3pft.ampr.org

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: rossi@vfl.paramax.com (Pete Rossi)
Subject: [6638] Special request 80 meter beacon is on NOW!!
Message-ID: <9604040327.AA08237@gvlf6-a>

Sorry for the short notice. I have a special request 80 meter beacon on for Frank, N4EKP NOW (10:20 PM EST Wednesday) on 3568. Running at 2 watts, 200 mW, 2 mW and 500 uW (at his request). It will be on until about 0415z (11:15 PM EST)

Depending on how things work out it may be on again Thursday evening.

Pete Rossi - WA3NNA
rossi@vfl.paramax.com

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Doug Hendricks <ki6ds@telis.org>
Subject: [6612] St. Louis Tuner Update
Message-ID: <3162B80F.4B41@telis.org>

Last Friday I got home from school, excited that I have the next 10 days off (spring break, one of the benefits of teaching). I checked my answering machine and got a garbled message that the St. Louis Tuner cases are done and ready to be picked up.

Great! I have Monday off, and I can drive over and pick them up, then go up to Dave Meacham's and we can build the first one so I can write the manual (Yeah, I learned from the Cascade! Grin). I go out to the garage where there is a huge pile of ST. Louis Tuner Parts, (just think guys, you have parts for 1 or 2 projects and it clutters up your garage, mine has parts for 250 projects!) and get a complete set of parts. Well almost. There was a package of Ferrite toroids that I ordered and had not opened, as the lady assured me that the toroids were in stock and would ship the next day. I open the box, and there are NO FT50-43 toroids. There is a note saying that they have been backordered. I quickly grab the phone and make the call. The manager tells me that she will contact the manufacturer and get back to me about drop shipping my order. Oh, she apologizes for not calling. They should arrive by Friday. Not a good start for the day.

I get in the pickup and head for San Jose, 125 miles away. Stop by my favorite cheap gas station. NO GAS! Uh oh, this is not going well. I get to the sheet metal company, and our order is all packaged up and waiting. I pay and then say that I would like to have the sample case back that I had given them to design the SLT case so it would be the same size as the Sierra/Cascade. The guy says he will go get it and I open the boxes and decide to put a case together just to be sure, (remember the type of day I was having.) I put the case together. Check the front panel fit for the capacitors, switches and meters. Perfect fit. Then the back panel. Perfect on all the connectors. Hey my luck is changing. I put the panels in the bottom of the case and then put the top on. OH NO! There is a 1/8" gap where the top and the bottom of the case meet.

The guy returns with my sample case. I show him the SLT case with the gap and say, "Houston, we have a problem here".

We compare the sample with the product, and there is a mistake. So, we go to a Vice-President's office, and show him our problem. He examines it, and says, "This is not good. You must have made a mistake when you ordered this".

I reply that they drew the plans from the sample and that "You made the mistake."

He gets the drawings out from the file. "Are these your drawings?"

"NO, your company did them. Remember the sample I brought in?"

"Oh, yes."

He finally admitted that the problem was theirs and what we decided to do was to redo the top of the cover and extend the sides 1/8" to meet the bottom. That will save them 300 pieces to remake, and in return they guaranteed me delivery by Friday. Of course, that means another trip to San Jose, but hey, I'm on break and have the time.

I take a case bottom, front and back panel, and go to Dave Meacham's house. We built NorCal St. Louis Tuner #1. Guys, it is a good product that I am proud of. I will have it at the meeting on Sunday so all of you can see it that attend. IF I get the cases on Friday, and the missing toroids tomorrow, and IF I get the Manual done, St. Louis Tuner kits could start shipping next week.

It has been a long process, but the fun is about to begin. Thank you for your patience, and no we don't have any more kits. 72, Doug

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Mike James <msj@best.com>
Subject: [6621] SWR bridge circuit
Message-ID: <3162CF08.5982@best.com>

I'm still looking for a good SWR bridge circuit I could put into my Sierra. I heard something about an LED-type indicator, but never got a clear reference. I could either go the meter or LED route. I have a very simple long-wire ant. tuner, but no SWR meter.

Thanks,

Mike James
KE0CH

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Nick Franco <kf2ph@bnl.gov>
Subject: [6609] Ten-Tec Argosy F/S
Message-ID: <3162AB92.180B@bnl.gov>

A Friend and co-worker is selling his Argosy I and assorted accessories.
I am posting his original packet message here. If anyone is interested
or wishes to discuss this further... contact him direct. TNX ES 72 ALL,
He did say he is willing to sell things separately.

Nick - KF2PH

>
>I have a Ten Tec Argosy I (analog display) for sale
>Switchable 5/50 Watts - All Solid State with filters and calibrator
>Covers all bands except 160 and 12 meters - CW and SSB
>Matching Power Supply
>Mobile Power Unit
>Heath Desk Mike
>Ham Stick Mobile Antenna for 40 Meters
>Strap Type Bumper Mount
>Bencher Paddles - Black Base
>MFJ Transmatch
>
>\$600 (Firm) Takes It All....
>
>73, Gary (ke2yk)

Gary Utz
Internet:utz@bnl.gov / ke2yk@bnl.gov
Sr. Systems Specialist
Brookhaven National Laboratory
PO Box 5000 Bldg 459
Upton, N.Y. 11973
(Phone)516-344-5903
(Fax)516-344-4445

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: rhaynes@metronet.com

Subject: [6600] Ten-Tec reflector
Message-ID: <Pine.SUN.3.91.960403084834.1106A-1000000@oj>

There is also a www site of the reflector postings you can browse
using Netscape or whatever you have. It is located at:
<http://www.akorn.net/hamradio/tentec/>

73's

Richard N5QXF
rhaynes@csc.com

| Blessed are they who can laugh at themselves, |
for they shall never cease to be amused.

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: jim_kc1fb@usa.pipeline.com (Jim Francoeur KC1FB)
Subject: [6606] Test from my new account
Message-ID: <199604031632.QAA23431@pipe5.t2.usa.pipeline.com>

Sorry for the bandwidth, but I wanted to test my new account
before I switch.

obqrp-got the RAT, Bob last night! I guess I'm a better ratter
than fox hound.

--

Jim Francoeur KC1FB QRP-L #29

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: kb7et@usa.pipeline.com (Jim Sheffield)
Subject: [6620] Thanks - P/S for QRP/KC-1
Message-ID: <9604031907.AA03477@pipe9>

Thanks to the following for their replies to my recent
posting:

Stan Cooper
Bob Follett
Ed, N5EM

Bruce Hopkins (special thanks!)
Stan Skelton

I am somewhat overwhelmed with the comraderie
and "spirit of ham radio" displayed by this user group.
You've got a good thing going. Reminds me why I
got into ham radio in the first place!

Thanks and 73 de Jim, KB7ET
kb7et@usa.pipeline.com

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: "David Kreinberg" <kreinbd@ccgate.dl.nec.com>
Subject: [6595] TUNING R5
Message-ID: <9603038285.AA828545856@smtpgw.ccgate.dl.nec.com>

Folks:

Well, I got my used R5 yesterday and will be
installing it this weekend.

I am not the original owner and the manual
doesn't say anything about this, but I had
a question for those R5 fans of our group:

The antenna pieces with the traps and caps
on them appear to have been adjusted by the
factory, that is to say, the cap adjustment
hardware that can be loosened to slide the
cap tubing up or down appear to be all pre-
adjusted by either the factory or the previous
owner. If this is true, then I do NOT want
to mess with these, true?

For tuning, I just want to lengthen/shorten
the tubing of the overall antenna body and not
mess with the trap/caps? If this is the case,
then it appears to be a rather simple tuning
process which should be straightforward.

Also, this antenna is in great condition - had
been in the arid Arizona sun. As a result, there
is very little corrosion on the tubing joints, etc.
Some joints do have some little deposits on them

and I was wondering about the best way to clean the alum. tube so I don't harm the material and encourage corrosion here in wet TX environment.

Thanks again for everyone's help on this. I am hoping to work a little DX with this new toy!

73 de Dave AC5GY

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Mill.Moore@valley.net (Mill Moore)
Subject: [6598] V-beam question
Message-ID: <841678@hanover.VALLEY.NET>

I'm thinking about ideas for antennas to use in the upcoming QRP Afield operating event, and wonder if anyone on the list has had experience with V-beams (i.e. a two-leg wire antenna with legs at least a wavelength long and often longer--basically half a rhombic), or sloping V-beams.

If the weather is good, I'm hoping to operate from a fire tower on a Vermont mountaintop. The tower would be a great, high support for the apex of a V array. I'm contemplating trying V-beam leg lengths of around 250 to 300 feet.

73,
Mill, AA1PB
Hartland, Vermont

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: JCoote@aol.com
Subject: [6615] Want: CQ Mag Article
Message-ID: <960403134409_368371900@mail06>

Hi all:

I am looking for a copy of a Jerry Sevick article supposedly seen in CQ magazine, called "Baluns For Antenna Tuners". The article probably was published in 1993-1994.

FTP? Upload?

or US Snail:

J. Coote,
PO Box 3131
South Pasadena, CA 91031

Thanks,

Jay
WB6AAM

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: "rohre" <rohre@arlut.utexas.edu>
Subject: [6636] Zener diode on final Transistor
Message-ID: <n1383561825.48597@msmailgw1.arlut.utexas.edu>

This topic was pretty well covered last year, but we have some new folks asking about it again.-----

The question was posed, how does the zener diode on the collector of the final transistor in many single output stage QRP rigs work?

There have been some vague and mysterious allusions to oscillations, and other urban myths, but it is pure and simple, if you go back to the books by Doug DeMaw and other ham authors.

A zener diode protects by clipping off voltage peaks which exceed its breakdown voltage, which should be less than that of the transistor you wish to save. (Naturally). The voltage peaks may appear there from a mismatched antenna load on the final, or an antenna feed breaking, or not being connected at Field Day in the excitement, etc. The whole idea is that you already have DC voltage on the collector, and you do not want an RF plus the DC to add up to more than the transistor is designed to handle. When the zener is not conducting, and the Normal SWR is seen by the rig, from a matched antenna or transmatch, the zener should look like a higher impedance than the normal load on the final transistor, so except for its stray capacitance to ground, it is out of the circuit.

If things get out of hand, and the zener is of a voltage rating such that it can quickly take the peak spike, then you save an expensive transistor. The zener will clamp to ground any voltage exceeding its rating, and act as a limiter on the overload of the final transistor voltage rating. The SWR does not have anything special that it does to the transistor except to be made up of RF voltage peaks and valleys, and peaks that you do not want to impose upon the final which is already handling a normal maximum DC level. In a way, it is very much like the pop off valve on top or side of your water heater; when pressure gets to a dangerously high level inside the heater, the pop off bleeds that pressure and some water, and resets. The zener goes into

conduction as long as a voltage peak exceeds its voltage clamping level, and then goes back to the higher impedance state.

Back in the early days of QRP transistor rigs, the very low power transistors did not have a zener at the collector. They worked mostly, and sometimes failed; but after zeners became cheaper than 5 watt final transistors, someone thought of the money saving, voltage safety valve idea we see in today's designs. I suspect that many a final has been saved from static charge upon an antenna by this means as well, maybe more than were saved from high Voltage Standing Wave Ratio, which is the proper term we usually see abbreviated "SWR"

A couple of back to back zeners might be cheap insurance for the older design 'QRP plus' receiver front ends as well, that seem to fail on antenna static buildup; although high ohm resistors would likely do as well. A diode after all, on a receiver front end is another detector, and that might cause an occasional concern. Putting them back to back in series keeps the forward junction direction from conducting, unless a REALLY big signal sets up next door!

Hope this helps explain this to those on the list that did not hear it before.

72, Stuart K5KVH

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Steve Miller <kg7pv@teleport.com>
Subject: [6639] Re: Insulators Wanted
Message-ID: <199604040332.TAA28753@desiree.teleport.com>

At 01:44 PM 4/3/96 -0500, you wrote:

>I am looking for PYREX glass "dog bone" antenna insulators. These are clear
>glass, around four to six inches in length with smooth holes in either end.
> They are used for HF wire transmitting antennas such as dipoles, vees, etc.

>

>I have seen them on a few HF wire antennas and in one (defunct) hardware
>store many years ago.

>

>73, Jay

>WB6AAM

>

I have had good luck making my own center and end insulators from thick
sheet clear

acrylic. Buy it from a local plastic shop (Tap Plastics) by the pound -
very cheap.

Cut it to size using a fine blade like a hack saw or metal cutting jig saw.

Drill your

holes, round the corners if ya want with the saw...then use a propane torch to "flame" the holes and edges. They end up clear, smooth and slightly rounded. Be sure to have good ventilation and handle the HOT plastic carefully! If you drill several holes you can loop the wire back and forth - won't pull out (I use 3 holes) and then loop it back around for ends or solder to your feedline or PL259. I even made a center insulator this way that clamps and holds my ladder line feeder. Takes two pieces and some stainless or brass machine nuts to hold it together. Hope this helps. 73 all.
Steve Miller KG7PV
Portland, Or (packet kg7pv @ k7iqi.or.usa.noam)
Norcal # 308, QRP-L #109

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Steven Wilson <randyw@crl.com>
Subject: [6599] Re: Keyer project done
Message-ID: <Pine.SUN.3.91.960403061540.12556B-100000@crl10.crl.com>

Thanks for sharing your code with us Daniel. Expect we will see a lot of different versions in the future. I hv been wanting to play with the 8051 as a keyer, now I have another project to do. :-) de stan ak0b

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
Subject: [6613] Re: Keyer project done
Message-ID: <3162b384.pandora@pandora.lugs.org.sg>

On Wed, 3 Apr 96 6:49:22 PST, "Paul Erickson" <paul1@wizard.ucs.sfu.ca> wrote:
> Hi Daniel,
>
> Looks great! Would there be any chance of making it a memory keyer? I am
> in need of a memory keyer, and was about to order a cmosIII but would love
> to build yours if memories and incremental serial numbers could be added.
>
> cheers, Paul
> VE7CQK
> email: paul1@wizard.ucs.sfu.ca

Hi Paul,

Yes, a memory keyer is a definite possibility but you'd have to add one of those serial EEPROMs from Microchip so that the memory is retained even after power off. The additional hardware is trivial, most of the work will be in the software. You'd also have to put in a few more buttons but the rest is implemented in software, and running serials is okay provided you can think of a scheme to let the keyer know you'd like to have that inserted. No probs, but you may not really want that feature unless you add more keys to increment/decrement them serial numbers. You'd end up with lots of buttons for features. I didn't have very much space so I did not do it. I will be looking into this though.

73 de 9V1ZV Daniel

--

Daniel Wee | daniel@pandora.lugs.org.sg
9V1ZV | daniel.wee@f516.n600.z6.fidonet.org

From owner-qrp-l@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Bruce Robertson <brucerob@epas.utoronto.ca>
Subject: [6603] Re: Line Noise
Message-ID: <Pine.SGI.3.91.960403105535.19400A-1000000@epas.utoronto.ca>

On Tue, 2 Apr 1996, Tom_Jennings wrote:

> That "noise sniffer" sounds like a handy tool to have around the
> shack. Periodically I get intermittent S9 noise. I would be be
> very interested in the schematic!

I don't know the one mentioned from Ham Radio mag., but I can tell you about a good sniffer that you can "make from household objects" (household for a ham, anyway). The unconnected end of a coax cable makes a good sniffer for loud household interference. Turn up the radio, plug in one end of a long piece of coax, and wander around with the other end. When you get near the source, your radio will tell you. I identified a bad dial on our apartment stove this way. (Too bad I couldn't get the super to do anything about it!)

72, VE3UWL

Bruce G. Robertson Dept. of Classics, U. of T.

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Bruce Robertson <brucerob@epas.utoronto.ca>
Subject: [6604] Re: Line Noise
Message-ID: <Pine.SGI.3.91.960403111239.19400B-100000@epas.utoronto.ca>

On Wed, 3 Apr 1996, Frank Paxton III wrote:

> Bruce :
>
> re: the sniffer. can you be real spacific for us BRAIN DEAD hippies
> out here ?
>
> 1> what radio ? sw, am broadcast ? what ?

Use whatever radio receives the noise well. Since my noise was on 40m I used the ham radio.

> 2> coax...ahhh what... rg-174 ? rg-11 ? 2 feet, 4 feet,
what ?

Any sort would do. It's just a matter of getting a line to the source of the noise. The length should be long enough to sniff out the house, just as garden hose needs to be long enough. (However, you can move around the radio.) this trick works best once you have some idea of where the noise is coming from and you want to get down to within inches.

72, VE3UWL

Bruce G. Robertson Dept. of Classics, U. of T.

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Steven Wilson <randyw@crl.com>
Subject: [6614] Re: Low Power - Quest to do the Impossible
Message-ID: <Pine.SUN.3.91.960403101711.17589A-100000@crl14.crl.com>

What issue of QST ?

Charles, the following had the background and circuit of the CCW receiver attachment. He has a BBS where you can download the software. See articles

- 1) deCarle, "A Receiver Spectral Display Using DPS", QST Jan 1992, pp 23-29
- 2) deCarle, "A DSP Version of Coherent CW", QEX Feb 1994 pp 25-30

de stan ak0b

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Kerry Miller <kmiller@flash.net>
Subject: [6590] Re: My First DX!
Message-ID: <1.5.4b12.32.19960403041930.006605f4@mail.flash.net>

At 10:36 AM 4/2/96 -0500, you wrote:

>
>
>A few questions. Is it bad to "dip" into a contest and try for contacts
>without seriously competing and sending in my results, as I did? (i.e.
>does the other guy only get credit for working me if I also send something
>in?).

Tim (et al),
Nope, it's no problem to just "dip" into the contest. If people didn't
"dip" into contests, the testers would soon run out of people to work. I
like to contest occasionally, but more often I just jump in for an hour or
two and get back out.

One thing you might consider is the way they score the winners in most
contests. They make a big database of all the callsigns worked in the
contest by all entrants to check for mis-copied call signs. If you only
work one station, your call will show up as a "unique" callsign. The people
running the contest often throw the "uniques" out as being mis-copied. If
you feel like it, try to work several stations so your call won't show up as
a "unique" just in case you work one of the top ten or so guys.

>If I write this GI station and send IRCs can I expect to get a QSL,
>even though it was just a contest contact?
>

You should be able to get a card, no prob. Maybe even use the QSL bureau if
you have enough to be worth it. Most hams in other countries are more
considerate than we are about sending QSL's!

73, 72, es Gud DX,
Kerry Miller

```
      \\\  
      (  )  
      ( oo )  
|-----oo00--()--00oo-----|  
| Kerry Miller                      Royse City, TX |  
|                                     |  
|                               WD5ABC |  
|-----|
```

kmliller@flash.net

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Stan Skelton <sskelton@cln.etc.bc.ca>
Subject: [6601] Re: P/S for QRP rig, KC-1
Message-ID: <Pine.3.89.9604030738.B12941-0100000@sparky>

Hi Jim...I just started out with my OHR Sprite 80 which draws abt 40ma on rx and 240ma on tx and also had line noise with my so-called filtered power supply....A friend who works installing batteries in fire alarm systems had to replace two 24ah batteries in a system that had only 1 bat unit. by law he had to replace both so gave me the good one. It gives super clean power and I figure I can use it for a couple of months before it will need recharging. It's not really portable 6" x 8" x 8" but its a gell cell and has lots of capacity for QRP rigs like these...
TtFn....Stan T.M. VE7 SKT QRP-L #34

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Rich Mulvey <mulveyr@vivanet.vivanet.com>
Subject: [6631] Re: P/S for QRP rig, KC-1
Message-ID: <199604032321.SAA04539@11.aa2ys.ampr.org>

>
> Hello all:
>
> Guess I'm the "new kid" on the block. This is
> my first posting. Just finished my OHR Explorer
> II 30M rig and first QSO was with PJ9CK, and he
> came back on first call. After 32 years as ham,
> looks like I'm hooked on QRP CW DX.
>
> Anyhow, am looking for recommendations for a
> REALLY CLEAN power supply, about 2-3 amp.
> Want no detectable hum or hiss in audio to my
> headphones. Any suggestions?
>

Hi Jim:

If you don't want to build a power supply, I can recommend the Radio Shack 2.5A regulated supply (the one with the big heat sink. :-)) I've had one running continuously for several years now, and there is no discernable line noise.

- Rich

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: kb7et@usa.pipeline.com (Jim Sheffield)
Subject: [6634] Re: P/S for QRP rig, KC-1
Message-ID: <199604032340.SAA16917@pipe10.h1.usa.pipeline.com>

On Apr 03, 1996 18:21:42, 'Rich Mulvey <mulveyr@vivanet.vivanet.com>' wrote:

>I can recommend the
>Radio Shack 2.5A regulated supply (the one with the big heat
>sink

Rich: I've tried this one - too much hum for me.
Also, Dick at OHR sez "don't buy any Radio Shack power supply", and I'd have to agree. (Permission to speak freely, assumed, sir). Thanks for the reply.

73 de Jim, KB7ET
kb7et@usa.pipeline.com

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Steven Wilson <randyw@crl.com>
Subject: [6635] Re: paddle question
Message-ID: <Pine.SUN.3.91.960403153716.7778A-100000@crl13.crl.com>

Paul I find the Bencher to have one of the lightest touch. I like the single paddle Kent, however, It is a heavy touch compared to the Bencher. I collect keys so have several and the only one I believe to be lighter touch is the old MacKey built in 1937.

Overall rate the Kent single paddle #1
Vibroplex and Brown Bros tie for #2 - Different type construction but both nice.
I would place Bencher #3.. Do not care for the construction. Think it is over priced. I also believe they used low quality material. The set

screws in mine have rusted. They should have used military quality or at least Parkerized ones. Do not believe the spring will last 60 years like my old MacKey.

I adjust my keys so a whisper will set them off. hi

One man thoughts. de stan ak0b

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: "Frank G3YCC" <g3ycc@enterprise.net>
Subject: [6629] Re: QRP+'s for sale
Message-ID: <199604032249.WAA12148@mail.enterprise.net>

> Date: Mon, 01 Apr 1996 08:52:24 -0700
> Reply-to: LVE1@inel.gov
> From: Larry East <LVE1@inel.gov>
> To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
> Subject: QRP+'s for sale

> Sure seen a lot of QRP+'s for sale the last few days; it that telling us
> something?? :-) :-) I have one and plan to keep it in spite of its flaws ...
> but then I enjoy "improving" things!

>
> 72, Larry W1HUE/7

>
>
>
>
>

A sure test of the quality of a rig is how often you see it for sale second hand and the price.

A used TT Argonaut can fetch the same price as when new in UK, WHEN there is one. Does that say something about the QRP+?

73

Frank G3YCC G QRP 042

QRP Web Page: <http://homepages.enterprise.net/g3ycc/>

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: larsennc@alaska.net (Nancy-KL7NY/Jim-AL7FS/Julian-WL7MP)
Subject: [6640] Re: QRP+'s for sale
Message-ID: <v01510100ad88f37be094@[206.149.67.79]>

Frank, Larry and the multitudes,

It is always fun to "jump to conclusions" but I doubt there is anything sinister going on with QRP+ rigs. Mine works great. I don't even have the complaints that some users seem to have. So.....

Why sell the QRP+? I have my "big rig", six Ten Tec's, three mono-banders, a back-up big rig, and a QRP+. I have found it difficult to operate all of them so guess what? Even though I like all my rigs, I am pairing down the list.

Seems like a good reason to sell some rigs.

See? Nothing sinister at all. See you all on the QRP bands.

73,

Jim Larsen
AL7FS
Anchorage, Alaska

>> From: Larry East <LVE1@inel.gov>
>> Subject: QRP+'s for sale
>
>> Sure seen a lot of QRP+'s for sale the last few days; it that telling us
>> something?? :-) :-) I have one and plan to keep it in spite of its flaws ...
>> but then I enjoy "improving" things!

>A sure test of the quality of a rig is how often you see it for sale
>second hand and the price.
>A used TT Argonaut can fetch the same price as when new in UK, WHEN
>there is one. Does that say something about the QRP+?

>-----

>73

>Frank G3YCC G QRP 042

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: Thom <thom@li.net>
Subject: [6624] Re: St. Louis Tuner Update
Message-ID: <Pine.SUN.3.91.960403144019.14962A-100000@linet01>

Hi,

Just a quick thank you Doug and the guys for all they do...looking forward to getting my tuner..thanks guys.

Tom
WB2QDG
thom@li.net

From owner-qrp-1@LEHIGH.EDU Wed Apr 3 22:10:06 1996
From: JCoote@aol.com
Subject: [6616] Re: V-beam question
Message-ID: <960403134407_368371879@emout09.mail.aol.com>

In a message dated 96-04-03 09:15:20 EST, Mill.Moore@valley.net (Mill Moore) writes:

>I'm thinking about ideas for antennas to use in the upcoming QRP Afield
>operating event, and wonder if anyone on the list has had experience with
>V-beams (i.e. a two-leg wire antenna with legs at least a wavelength long
and
>often longer--basically half a rhombic), or sloping V-beams.
>
>If the weather is good, I'm hoping to operate from a fire tower on a Vermont
>mountaintop. The tower would be a great, high support for the apex of a V
>array. I'm contemplating trying V-beam leg lengths of around 250 to 300
feet.
>
>73,
>Mill, AA1PB
>Hartland, Vermont

I was just reading about V-beams, sloping V-beams, true longwires and rhombics in some ARRL books and Army FMs.

>From what I get, a terminated V-beam (sloping or non-) is directional opposite the apex. An unterminated v-beam will be bidirectional, but favors the v side.... similar to an end-fed longwire.

The texts suggests good RF grounds in the terminated version; radials from each termination resistor, and (If I read this right) a common radial connected to each termination running under each antenna leg back to the center post and connected together there. That sounds like a pain to set up in hilly/rocky areas.

The balun is 600 ohms and the terminations are supposed to be 300 ohms, and capable of 1/2 the transmitting power (a couple of 2-w non-inductive carbon

resistors for QRP).

Length of each leg and especially the apex angle have a lot to do with the beam pattern. The sloper would give you a lower radiation angle for DX. On the lower bands the antenna would act like a dipole- combined high and low angle, not much directivity.

There are compromise apex angles which cover several of the higher HF bands, or you could pick one optimum setting per band. The angles and wavelength information are in ARRL or other antenna books.

73, Jay
WB6AAM